Engineering Interpretations

Building Site Development

Soil properties influence development of building sites, including the selection of the site, the design of the structure, construction, post construction performance, and maintenance. Soil limitation ratings of slight, moderate, and severe are given for shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns, landscaping, and golf fairways.

Shallow Excavations

Shallow excavations are trenches or holes dug in the soil to a maximum depth of 5 or 6 feet. They are used for pipelines, sewer lines, telephone and power transmission lines, basements, open ditches, and cemeteries. The ratings are based on the soil properties that influence ease of digging and resistance to sloughing.

Dwellings With or Without Basements

These are single-family houses of three stories or less. The foundation is assumed to be spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or the depth of maximum frost penetration, whichever is deeper, for houses without basements, or at a depth of 7 feet if a basement is constructed. The ratings are based on properties affecting soil strength and settlement under a load, and those that affect excavation and construction costs.

Small Commercial Buildings

Limitation ratings are given for the undisturbed soil on which small commercial buildings of less than three stories without basements are built. The foundation is assumed to be placed on spread footings of reinforced concrete at a depth of 2 feet or the depth of maximum frost penetration, whichever is deeper.

Local Roads and Streets

Limitation ratings are given for the use of soils for construction of improved local roads and streets that have all-weather surfacing, commonly of asphalt, gravel with binder in it, or concrete, and that are expected to carry automobile traffic all year. These roads and streets are graded to shed water, and conventional drainage measures are provided. With the probable exception of the hard surface, roads and streets are built mainly from the soil at hand.

Lawns, Landscaping, and Golf Fairways

The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criterion in rating. Traps, trees, roughs, and greens are not considered as part of the golf fairway. The properties considered are those listed that affect plant growth and trafficability after vegetation is established.

This subsection includes:

• (a) Building Site Development

Building Site Development

Map symbol and soil name	Dwellings without basements		Dwellings with basements		 Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Bp: Borrow pits	 Not rated 	 	 Not rated		 Not rated 		 Not rated		 Not rated	
Ca: Caruthersville, FREQUENTLY FLOODED	 Very limited 		 Very limited		 Very limited		 Very limited		 Very limited	
	<pre> ~flooding (very limited) ~wetness (moderately limited)</pre>	1.00 0.45	~flooding (very limited) ~wetness (very limited)	1.00	<pre> ~flooding (very limited) </pre>	1.00	~flooding (very limited) 	1.00	~flooding (very limited) 	1.00
Ch: Caruthersville variant, FREQ. FLOODED, SANDY SUBSTRATUM	 Very limited		 Very limited		 Very limited		 Very limited		 Very limited	
VARIANT	<pre> -flooding (very limited) -wetness (moderately limited)</pre>	 1.00 0.45	-flooding (very limited) -wetness (very limited)	 1.00 1.00	~flooding (very limited) 	1.00	~flooding (very limited) 	1.00	 ~flooding (very limited) 	1.00
Cm: Commerce	 Moderately limited ~shrink-swell (moderately limited) ~wetness (moderately limited)	 0.45 0.37 	 Limited ~wetness (limited) ~shrink-swell (moderately limited)	 0.99 0.45 	 Moderately limited ~shrink-swell (moderately limited) 	 0.45 	 Moderately limited ~shrink-swell (moderately limited) 	 0.45 	 Not limited 	
Cr: Commerce	 Moderately limited ~shrink-swell (moderately limited) ~wetness (moderately limited)	 0.45 0.37	 Limited ~wetness (limited) ~shrink-swell (moderately limited)	 0.99 0.45 	 Moderately limited ~shrink-swell (moderately limited) 	 0.45 	 Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	 1.00 0.45 	 Not limited 	

Building Site Development

Map symbol and soil name	 Dwellings without base	without basements Dwellings wi		Owellings with basements Small commercial buildings			Local roads and str	eets	Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Cs: Commerce	Moderately limited ~shrink-swell (moderately limited) ~wetness (moderately limited)	0.45	 Limited ~wetness (limited) ~shrink-swell (moderately limited)	0.99	 Moderately limited ~shrink-swell (moderately limited)	0.45	 Moderately limited ~shrink-swell (moderately limited)	0.45	 Moderately limited ~too clayey (moderately limited)	 0.60
Ct: Cooter, OCCASIONALLY FLOODED	 Very limited	 	 Very limited		 Very limited		 Very limited		 Moderately limited	
Ł TOODFD	<pre> -flooding (very limited) -wetness (moderately limited)</pre>	 1.00 0.45	-flooding (very limited) -wetness (very limited)	1.00	 ~flooding (very limited) 	 1.00 	 ~flooding (very limited) 	 1.00 	-flooding (moderately limited) -too clayey (moderately limited)	 0.60 0.60
Crevasse, OCCASIONALLY	 Very limited 	 	 Very limited 		 Very limited 		 Very limited 		 Moderately limited 	
FLOODED	~flooding (very limited)	 1.00 	-flooding (very limited) -wetness (slightly limited)	 1.00 0.24 	~flooding (very limited) 	 1.00 	 ~flooding (very limited) 	 1.00 	-flooding (moderately limited) -too clayey (moderately limited) -droughty (moderately limited)	 0.60 0.60 0.52
Cu: Crevasse	 Not limited 	 	 Slightly limited ~wetness (slightly limited)	 0.24	 Not limited 	 	 Not limited 	 	 Limited ~droughty (limited)	 0.92
Cv: Crevasse, ACID VARIENT	 Not limited 	 	 Not limited 	 	 Not limited 	 	 Not limited 	 	 Moderately limited -droughty (moderately limited)	 0.34

Building Site Development

Map symbol and soil name	Dwellings without basements		Dwellings with basements		 Small commercial buildings 		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Cw: Crevasse	 Not limited 		Slightly limited -wetness (slightly limited)	0.24	 Not limited 		 Not limited 	 	 Slightly limited ~droughty (slightly limited)	0.26
Db: Dubbs	 Moderately limited ~shrink-swell (moderately limited)	 0.45 	 Slightly limited ~shrink-swell (slightly limited)	0.18	 Moderately limited ~shrink-swell (moderately limited)	 0.45 	 Moderately limited ~shrink-swell (moderately limited)	0.45	 Not limited 	
Dd: Dundee	 Very limited ~shrink-swell (very limited) ~wetness (moderately limited)	 1.00 0.44	Very limited -shrink-swell (very limited) -wetness (very limited)	1.00	 Very limited ~shrink-swell (very limited) 	 1.00 	 Very limited ~shrink-swell (very limited)	 1.00 	 Not limited 	
De: Dundee	 Very limited ~shrink-swell (very limited) ~wetness (moderately limited)	 1.00 0.44	 very limited ~shrink-swell (very limited) ~wetness (very limited)	1.00	 Very limited ~shrink-swell (very limited) 	 1.00 	 Very limited ~shrink-swell (very limited)	1.00	 Not limited 	
Dn: Dundee variant, THICK SURFACE VARIANT	 Very limited	 	 Very limited		 Very limited		 Very limited		 Limited 	
VACIANI	<pre>~shrink-swell (very limited) ~wetness (moderately limited)</pre>	 1.00 0.44	~wetness (very limited) ~shrink-swell (limited)	1.00	-shrink-swell (very limited)	 1.00 	-shrink-swell (very limited)	1.00	~too acid (limited)	0.60
Du: Dundee	 Very limited ~shrink-swell (very limited) ~wetness (moderately limited)	 1.00 0.44	Very limited -shrink-swell (very limited) -wetness (very limited)	1.00	 Very limited ~shrink-swell (very limited) 	 1.00 	 Very limited ~shrink-swell (very limited)	1.00	 Not limited 	

Building Site Development

Map symbol and soil name			Dwellings with basem	ents	Small commercial bui	ldings	Local roads and str	reets	Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ha: Hayti, OVERWASH	Very limited ~wetness (very limited) ~shrink-swell (very limited)	1.00	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	0.54	 Very limited ~wetness (very limited) ~shrink-swell (very limited)	1.00	 Very limited ~wetness (very limited) ~shrink-swell (very limited)	1.00	 Very limited ~wetness (very limited)	11.00
Hc: Hayti	 Very limited ~wetness (very limited) ~shrink-swell (very limited)	1.00	 very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.54	 Very limited ~wetness (very limited) ~shrink-swell (very limited)	1.00	 Very limited ~wetness (very limited) ~shrink-swell (very limited)	1.00	 very limited ~wetness (very limited) ~too clayey (very limited)	 1.00 1.00
Hy: Hayti	Very limited -wetness (very limited) -shrink-swell (very limited)	1.00	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.54	 Very limited ~wetness (very limited) ~shrink-swell (very limited)	1.00	 Very limited ~wetness (very limited) ~shrink-swell (very limited)	1.00	 Very limited ~wetness (very limited) ~too clayey (moderately limited)	 1.00 0.60
Le: Orthents			 Not Rated	 	 Not Rated 		 Not Rated 		 Not Rated 	
LRd: Orthents	Not Rated Not Rated Not Rated		Not Rated Not	 	 Not Rated 		 Not Rated 		Not Rated Not Rated Not Rated Not Rated Not Rated	
Po: Portageville	 Very limited ~shrink-swell (very limited) ~wetness (very limited)	1.00	 Very limited ~shrink-swell (very limited) ~wetness (very limited)	 1.00 1.00	 Very limited ~shrink-swell (very limited) ~wetness (very limited)	1.00	 Very limited ~shrink-swell (very limited) ~wetness (very limited)	 1.00 1.00	 Very limited	 1.00 1.00

Building Site Development

Map symbol and soil name	,		 Dwellings with basem 	ents	 Small commercial buil 	dings	 Local roads and str 	eets	Lawns and landscaping	
	Rating class and limiting features	Value 	Rating class and limiting features	Value	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value
Pr: Portageville	 Very limited ~shrink-swell (very limited) ~wetness (very limited)	1.00	 very limited ~shrink-swell (very limited) ~wetness (very limited)	 1.00 1.00	 Very limited ~shrink-swell (very limited) ~wetness (very limited)	1.00	 Very limited ~shrink-swell (very limited) ~wetness (very limited)	 1.00 1.00	 Very limited ~wetness (very limited) ~too clayey (moderately limited)	 1.00 0.60
Re: Reelfoot	 Very limited ~shrink-swell (very limited) ~wetness (moderately limited)	 1.00 0.59	 Very limited ~wetness (very limited) ~shrink-swell (limited)	 1.00 1.00	 Very limited ~shrink-swell (very limited) ~wetness (slightly limited)	 1.00 0.28	 Very limited ~shrink-swell (very limited) ~wetness (slightly limited)	 1.00 0.28	 Slightly limited ~wetness (slightly limited)	 0.28
Rf: Reelfoot, OVERWASH	 Moderately limited -wetness (moderately limited) ~shrink-swell (moderately limited)	 0.59 0.45	 -wetness (very limited) -shrink-swell (limited)	 1.00 0.82	 Moderately limited -shrink-swell (moderately limited) -wetness (slightly limited)	0.45	 Moderately limited -shrink-swell (moderately limited) -wetness (slightly limited)	 0.45 0.28	 Slightly limited ~wetness (slightly limited)	
Sa: Psamments, FREQUENTLY	 Very limited	 	 Very limited 		 Very limited 		 Very limited 	 	 Very limited 	
FLOODED	-flooding (very limited) 	 1.00 	-flooding (very limited) -wetness (slightly limited)	1.00	 ~flooding (very limited) 	 1.00 	 ~flooding (very limited) 	 1.00 	<pre> ~flooding (very limited) ~droughty (very limited) ~too sandy (moderately limited) </pre>	 1.00 1.00 0.50

Building Site Development

Map symbol and soil name			Dwellings with basem	Small commercial bui	ldings	Local roads and sti	reets	Lawns and landscaping		
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Sh: SharkeySharkey, OVERWASH	Very limited ~shrink-swell (very limited) ~wetness (very limited) Very limited ~shrink-swell (very limited) ~wetness (very limited)	1.00 1.00 1.00 1.00	Very limited ~shrink-swell (very limited) ~wetness (very limited) Very limited ~shrink-swell (very limited) ~wetness (very limited)	1.00	Very limited ~shrink-swell (very limited) ~wetness (limited) Very limited ~shrink-swell (very limited) ~wetness (limited)	1.00	Very limited ~shrink-swell (very limited) ~wetness (limited) Very limited ~shrink-swell (very limited) ~wetness (limited)	1.00	 very limited ~too clayey (very limited) ~wetness (limited) Limited ~wetness (limited)	1.00
Sm: Sharkey		 1.00 1.00	Very limited ~shrink-swell (very limited) ~wetness (very limited)	 1.00 1.00	 Very limited ~shrink-swell (very limited) ~wetness (limited)	 1.00 0.99	 Very limited ~shrink-swell (very limited) ~wetness (limited)	 1.00 0.99	 Limited ~wetness (limited) ~too clayey (moderately limited)	0.99
Sr: Sharkey	 Very limited ~shrink-swell (very limited) ~wetness (very limited)	 1.00 1.00	 very limited ~shrink-swell (very limited) vwetness (very limited)	 1.00 1.00	 Very limited ~shrink-swell (very limited) ~wetness (limited)	1.00	 very limited ~shrink-swell (very limited) ~wetness (limited)	1.00	 Limited ~wetness (limited)	0.99
Crevasse	Not limited	 	 Slightly limited ~wetness (slightly limited)	0.24	 Not limited 		 Not limited 		 Limited ~droughty (limited)	0.83
St: Steele	 Moderately limited ~wetness (moderately limited) 	 0.51 	Very limited -wetness (very limited) -shrink-swell (moderately limited)	0.59	 Slightly limited ~wetness (slightly limited)	0.13	 Slightly limited ~wetness (slightly limited)	0.13	 Slightly limited ~wetness (slightly limited)	0.13

Building Site Development

Map symbol and soil name	1 3		 Dwellings with basem 	ents	 Small commercial buil 	dings	 Local roads and str 	eets	Lawns and landscaping	
	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value
Tp: Tiptonville	 Moderately limited ~shrink-swell (moderately limited) ~wetness (slightly limited)	0.45	Limited -wetness (limited) -shrink-swell (moderately limited)	 0.95 0.40	 Moderately limited ~shrink-swell (moderately limited)	 0.45	 Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	 1.00 0.45	 Not limited 	
w: Water	 Not rated 	 	 Not rated 		 Not rated 	 	 Not rated 		 Not rated 	
Wa: Wardell	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.45	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.32	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.45	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.45	 Very limited ~wetness (very limited)	1.00
Wd: Wardell	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.45	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.45	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.45 	 Very limited ~wetness (very limited) ~shrink-swell (moderately limited)	 1.00 0.45	 Very limited ~wetness (very limited)	1.00